

NATURE CURE FOR DIABETES





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Nature Cure & Yoga Health Centre,
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Cover

The Sun, the Sea and Land respectively represent the elements of fire, water and earth, The waves are caused by the elements of Aakaash (ether) and air.

The person embodying the five elements in a state of ecstasy, is all set to take a plunge in the ocean of bliss!

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FOREWORD

The Servants of the People Society was founded by Punjab Kesari Lala Lajpat Rai and inaugurated at Lahore in 1921 by Gandhiji. It is a life order. Only those who donate their whole life to the service of the people of the country can become its members. It had illustrious Life Members like Purushottamdas Tandon, Balvantray Mehta and Lal Bahadur Shastri, the Prime Minister of India, 1964-66. With its headquarters at Delhi, the Society is dedicated to the service of the people in more than 16 States.

Looking at the resources of the country in money and man-power, it was considered that the objective of "Health for all by 2000 AD" could not be achieved without popularising Nature Cure and Yoga. A Nature Cure and Yoga Health Centre was started in Delhi in October 1983. This Centre has made lot of progress and has become extremely popular. One of the objectives of this Centre is to publish books on this subject. Our first book in English, to serve as a basic primer on the subject, was published in 1988. This book "Back to Nature for HEALTHY LIVING" was released by the Prime Minister of India on 23rd August 1988. That book is now in its third edition. Food Therapy is the most important part of Nature Cure, so a new 264 page book on "Food for Health" was published in July 1991. It is a unique book on nutrition. It deals extensively with all aspects of some of the most important food items. It also deals with food as preventive medicine for various body conditions.

With the above background, the Centre has now decided to bring out six booklets on the subjects of Nature Cure for high blood pressure, nature cure for diabetes and similarly for asthma, arthritis, for some stomach conditions and for some women's

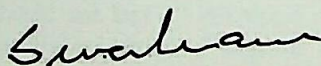
conditions. This is the second of that series of booklets. The table of contents will show how comprehensively the subject has been dealt with.

In naturopathy, food plays a dominant role. Exercise including yoga comes next. Hydrotherapy can, in case of certain body conditions, be very effective. Colourtherapy and acupressure have their own uses in certain conditions. Collectively, all these therapies can form an effective bulwark against disease.

Some eminent, knowledgeable and devoted persons have contributed various chapters of this booklet. The booklet has been co-ordinated and edited by Shri A.P. Dewan, who had been with the World Food Programme of UN/FAO, for more than 14 years and who is now the Chairman of our Nature Cure Centre.

Nature Cure techniques are known to work. Gandhiji used to say, "I have as much faith in the Nature Cure of diseases as I have in the innocence of children"! Suggestions made in this booklet are known to work but they require patience. Solution of chronic problems does take time. It may, however, be stated that all the suggestions made herein may not work with everybody to the same extent because of the differences of body chemistry, environment, heredity and mental make up etc. It will be, therefore, for everybody to try and find out which techniques suit his or her body condition the most. Such a trial will do no harm. Gandhiji also advised accordingly. The objective of the information given in this booklet is to help you to design an appropriate programme for yourself so that you could effectively avoid such health hazards which may otherwise lie your way.

I wish you luck.



Sevakram
Chairman,
Servants of the People Society
Delhi Branch.

CAUSES AND SYMPTOMS

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Diabetes is a chronic degenerative disease. It is caused by the disturbance of the metabolism of the whole body and of its hormonal balance. Diabetes occurs in two forms—diabetes insipidus and diabetes mellitus. Diabetes insipidus is a rare metabolic disorder caused by a deficiency of pituitary hormones and its usual treatment is the replacement of those hormones. Diabetes mellitus, the commonly known diabetes, is of two types. Insulin dependent juvenile diabetes (Type-I) often occurs in children and young adults when the cells that make insulin stop working. The exact cause of such a non function is not yet known. Non insulin dependent diabetes (Type II) occurs where body makes some insulin but is unable to use it effectively.

According to the American Diabetes Association, diabetes is a disease that affects the way your body uses food. Normally, your body changes sugars, starches and other foods you eat into a form of sugar called glucose. Your body uses glucose for fuel. Glucose is carried to your body's cells by the blood stream. Insulin, a hormone made by the pancreas, helps glucose to enter the body cells. There, glucose is changed into energy and used, or stored for later use. In diabetes, something goes wrong with this process. Food is changed into glucose but either your body doesn't make enough insulin or it can't use insulin correctly. Because glucose is unable to enter the cells, it builds up in the blood stream.

The tendency to develop diabetes is believed to be genetic. Type II non insulin dependent diabetes, which is also called

adult-on-set diabetes, has an incubation period of 15 to 20 years before it becomes manifest. 75% of such diabetes patients will generally be above 40 years of age.

Normally the glucose level in the blood remains between 80 and 120 mg%. When there is insulin deficiency or when glucose cannot enter the body cells the glucose level in the blood rises. If it reaches 175 mg% or above, sugar is likely to spill over into the urine, carrying with it large quantities of water and such vitamins and minerals which are soluble in water. An electrolytic imbalance is caused, resulting in dehydration and a feeling of thirst. As the glucose fuel cannot enter into the cells, body takes recourse to emergency measures and starts converting body fats and protein into energy resulting in the wasting of the body and weight loss.

Besides heredity, obesity is one of the main causes of diabetes. Excess fat prevents insulin from working properly. Too much food taxes the pancreas and ultimately its normal activity of producing insulin gets paralysed. It is interesting to note that diabetes is almost unknown in countries where people are poor and cannot afford to overeat. In USA about 80% of Type II diabetics are reported to be overweight. Their sedantray existence and lack of exercise add to the damage.

③ Diet is another cause. Excess intake of refined carbohydrates is believed to cause diabetes. In wartime Britain when only whole wheat bread was made and used, incidence of diabetes dropped by 55%. Excess use of saturated fats and excess sugar consumption can also cause diabetes. Dr. A.M. Cohen of Israel's paper in the prestigious American Journal Metabolism in 1972 implicated excess sugar as a contributory cause of diabetes along with "hereditary predisposition". It would be interesting to note that whereas in 1815 AD an average Englishman consumed 7 1/2 lbs. (3.4kgs) of sugar a year, in 1976 the average American consumed 120lbs (54.5kgs) of sugar a year. The nutritionists call this a "national act of health suicide."

④ Liver is the place where sugar is stored in the form of glycogen as an energy reserve. Liver disfunction could either be the cause or result of diabetes. Pancreatic insufficiency, caused by stress, nervous exhaustion, consumption of refined food, coffee, alcohol, and smoking are among the more common causes of

diabetes. Baking powder and soda decrease the effectiveness of the pancreatic juices and so does the food cooked in aluminium utensils.

It is very important that level of sugar in blood stays relatively even. Too little starves the cells of energy and too much disturbs the body's chemical balance. Hormone insulin is the key to the proper regulation of this sugar level. In case of insulin dependent Type I diabetes, where pancreas do not produce any insulin, it may be difficult to get off insulin completely. The strategy in such cases could be to reduce insulin requirements through natural therapy and life style changes.

Hypertension and high cholesterol are risk factors in diabetes. Symptoms of Type I diabetes is frequent urination, weight-loss, fatigue, nausea, thirst and hunger. Raised blood sugar level and sugar in urine are, of course, there. Type II non-insulin dependent diabetes has the above symptoms and more, like muscle wasting, dry skin, itching, tingling of hands and feet, blurred vision, slow healing of cuts and constant drowsiness.

Incidence of diabetes has increased six fold since 1935. It is estimated that there are above one million new cases world-wide every year. Disease claims 5% more people each year than the year before. Something has to be done. Drugs are failing. Invoke the help of nature.

NATURAL APPROACH

Dr. B. Venkat Rao

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Dr. Robert E. Duke in his book "Holistic Health" (New Horizon Press, New Jersey) says:

"The Laws of Nature cure and heal, doctors don't. All a doctor can do is advise on how to speed up the process of getting well. Remember he or she cannot put new cells in the body, repair bones or sew together torn ligaments."

Holistic healing, then, respects the body's ability to heal itself. The body can create the vital energy we all desire and seek. Diet, exercise and positive thinking are important, as is stress management and proper attention to the physical self, to the mind and to the soul."

The gross body is made of the five element of aakaash (ether), air, fire, water and earth. The imbalance of these elements is the main cause of disease. It consequently becomes imperative for living a healthy life that the daily programmes and activities are such that the balance of these elements continues to be restored in the body.

The human body is a perfect machine made self-sufficient by the creator. It has got computers to take decisions and chemical factories in the form of glands to produce chemicals etc required for the proper working of this machine. The human body has primarily two systems i.e. defensive and reparative. These mechanisms for maintaining a constant internal environment are complex but beautifully co-ordinated. The skin, body flora e.g. bacteria of the mouth, traps of the nostrils, acidity of the stomach

and R.E. cells are some examples of the defensive mechanism of the body. The secondary defences consist of the immune system, blood clotting system and the system which adjusts the body temperatures etc. Reparative system is illustrated by the wound healing process, clotting, cell multiplication, discarding of fibrous tissues and regeneration of the skin and formation of new fibrous tissues. These examples show that a master strategy exists for repairs and it can be skilfully and effectively executed by the system itself, if it is given opportunity and time to do so.

Each person is a unique individual, of unique heredity, unique environment, unique bio-chemical structure, and a unique mental background. Healthy living rules have to be tailored and modified to meet the requirements of each such unique individual! This individual must be actively and knowledgeably involved in designing a programme towards his healthy living.

Naturopathy offers cure for a whole person, not for a particular disease only. Naturopathy believes that the body has the inherent ability to heal itself with the help of its vital force. According to naturopaths, germs do not cause disease. It is, on the contrary, the disease which leads to germs. The aim of naturopathy is to cleanse the body, rebuild the person and teach him to live in harmony with his self and the environment. In this way, naturopathy becomes a way of life.

Natural approach has first to think of the removal of the causes which bring diabetes. Pancreas has to be activated. This objective could be achieved in various way e.g. by providing proper nutrition, by stimulation provided by some of the rays of the sun, or by resorting to hydrotherapeutic techniques and proper exercises. or by acupressure which sends more life force to that organ. Yoga asanas could effectively massage and lubricate pancreas into meaningful action. Assistance could be available from the practice of pranayam also.

Internal production of insulin has to be supplemented by the intake of such foods which contain insulin like substances. Those foods have to be taken in a manner that their efficacy is neither lost nor reduced.

Diet and exercise have to be geared in such a manner that a particular amount of insulin will enable increased amount of

glucose to be transferred from the blood stream into the cells. There could be exercises which do not cause appreciable weight loss but which increase tissue sensitivity to insulin.

Diet regulation is necessary in other directions as well. Refined carbohydrate diet must be replaced by a highly unrefined carbohydrate diet. All refined foods must be excluded.

Obesity has to be fought. Weight has to be lost. The diabetic must get rid of the excess fat. Sedantary life must give place to action and exercise.

Natural ways can succeed where drugs have failed to control diabetes.

FOODTHERAPY

A.P. Dewan

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Chairman, Nature Cure and Yoga Health Centre, Lajpat Bhavan.

Food has, from day one, influenced and even regulated the health of humans. The construction of the body structure in the womb starts with the food taken by the mother. On birth the pre-natal diet of the mother is replaced by breast feeding and then by other foods taken by the infant. The food, with its faults and failings and with its potential and power, continues to build the body structure. Food provides the building blocks.

When a wall made of brick and mortar develops some faults, what is the best material for its repairs? Brick and mortar, of course! Neither timber, nor iron and steel which are stronger, nor any other fanciful materials would restore that wall to its original form and strength. The same is true of the human body. All faults and failings of the body, built by food, will also have to be repaired with the brick and mortar of food, if such repair and replacements are to be effective and acceptable. This food that could be your medicine has to be a "Live" food, food that has yet in it that "Life Force", the "Pranas" of the vegetable kingdom. Enzymes and amino acids are some of the manifestations of that "Life Force" of those foods. These enzymes at 50°C (122°F) become sluggish and at a temperature of 55°C (131°F) all the enzymes are dead.

This question of food as a preventive medicine has been dealt at length in a 264 page book "Food for Health", published by these very publishers. Some relevant aspects which are important for controlling diabetes are dealt with below:

There is a certain minimum programme of food which must be

followed by every one to remain healthy. Certain food habits must also be followed. But, if, because of heredity, environment or taste, you are in danger of diabetes, then certain special foods must also be taken or given up for preventing that condition and for overcoming the problem. These three aspects are dealt below: In case of diabetics, food is truly the medicine!

A MINIMUM PROGRAMME OF FOOD

Food, for easy assimilation, must not only be acceptable but tempting for you. Variety is also necessary for a nutritionally complete diet. If wrong tastes have been formed, those must be corrected gradually but soonest.

Food alone cannot provide absolute protection from all health problems. Your habits and style of life also play some part in determining the state of you health. By following the minimum programme of food out-lined below, however, you increase very considerably, your chances of living a healthy life:

- i. Minimum Salt: Salt is the greatest culprit. You get enough salt from vegetables etc., in organic form. Reduce drastically the use of inorganic salts. Canned and preserved foods have lots of salt. Avoid these altogether.
- ii. Minimum Sugar: Sucrose, i.e., table sugar, has no nutrients except calories and carbohydrates. It produces acidity. For its digestion you need calcuim which may have to be obtained from your bones, if inadequate in you diet. For sweetness use honey and other natural sugars like gur, dates etc to a certain extent. Reduce use of white sugar drastically.
- iii. Minimum fat: Intake of excesive fat is the main cause of two-thirds of your ailments. Reduce it drastically. Use only those oils which have a very high proportion of poly unsaturated and monounsaturated fatty acids, e.g. : sunflower oil, corn oil.etc. Try to delete fried foods from your diet altogether.
- iv. No Smoking

Take the following food items, almost religiously, every day:

- i. Freshly crushed raw garlic 3-4 gms a day
- ii. Raw onions 20-25 gms a day
- iii. Raw salads with lettuce, cabbage, cauliflower, carrots, brussel sprouts, radish, turnip, mustard, cucumber, etc. according to the season. 100-125 gms a day
- iv. Honey 2 teaspoons, a day
- v. Lemon 2 a day
- vi. Freshly extracted juice of fresh seasonal fruits or vegetables, one glass a day within minutes of extraction.
- vii. Bran supplement (oat bran, wheat bran) 10 gms a day

Gradually increase the proportion of the following foods in your diet:

- i. Fresh seasonal fruits of the area.
- ii. Soybean, in some form or the other, i.e., tofu, tempeh, soy milk, nutrinuggets, soy powder, plain cooked soybeans or soybean sprouts. Include one of these in one meal on at least 4-5 days a week.
- ✓ iii. Carrot, spinach and all other vegetables which are yellow or orange in colour, or have green leaves high in chlorophyl.
- iv. Fruit and vegetable juices
- v. Sprouts—sprouts of mung and alfalfa are easy to make and are very nutritious.

Reduce the intake of the following foods:

- i. Non-vegetarian foods. Try to stop the intake of all red meats altogether, immediately. Become a vegetarian. If you cannot become a pure vegetarian, then gradually reduce poultry and eggs also so that you take only low protein fish or seafood only on 1 or 2 days a week during the interim period.
- ii. Whole milk and its products. Take skimmed milk or up to 2% fat milk and their products instead. Better take yogurt. Processed cheeses must be replaced by low fat cottage cheeses.
- iii. Tea and coffee. Do not exceed 2 cups a day of conventional

tea or coffee—decaffeinated, if possible. If you need more, try herbal teas.

iv. White flour and its products. Replace these with whole grains, whole wheat or soya breads, unpolished rice etc.

Water Intake:

i. Flush your system by taking water copiously.

vi. Start the day with at least one glass of water which has stayed overnight in a utensil, preferably of copper.

vii. No water within half an hour before a major meal or for two hours after such a meal.

Food Habits

Food which has not been cooked on fire has great importance for your health. Cooking plays havoc with enzymes and some vitamins and minerals. Cooking should preferably be done in earthenware or stone ware utensils, enamelled vessels come next. Brass or copper vessels, which have been properly tinned, may be a good third. Steaming, boiling and baking are acceptable forms of cooking. Roasting is bad, if the colour of the roasted thing changes. Frying is the worst. Cut the food just before cooking. Cook for the shortest time possible using a tight fitting lid. The Cooked food should preferably go directly from the fire to the table. The strategy should be never to leave the food at temperatures between 5°C (41°F) and 63°C (145°F), when harmful bacteria can multiply rapidly, for more than 90 minutes at a time. While reheating the food, temperature of more than 75°C (167°F) must be reached to ensure that all harmful bacteria are killed.

Use sprouts and food stuffs grown locally. Eat the produce of the season. Sprouts provide a fountain of power. Develop a taste for leavened foods. These promote longevity. Use turmeric (haldi) extensively in your food. Eating less is good for health. More people die of overeating than under eating. Dose makes poison even out of good food.

There are many benefits in taking food at fixed hours. Do not take food for one hour after moderate or severe exercise. Do not take a major meal till your appetite has grown well "A good meal ought to begin with hunger."

Diabetics-on-insulin should eat three normal meals with regu-

lar snacks in between meals. It should not result in excessive eating. Snacks should be light, of foods which are allowed to diabetics. With long intervals between meals, continuing action of insulin could result in blood sugar levels dropping too low.

Start eating with a relaxed state of mind. Pass urine and clean the bowels before a major meal. If possible, have a stroll before the meal. Sit with friends and relax just before the meal. Squatting while eating is the best posture. Do not eat fast. Masticate and munch well. Talk the least during eating. Do not eat raw vegetables and raw fruits at the same time. Immediately after meals do not do any work involving heavy labour.

Special Foods

Earlier it was thought that diabetes is a disease characterised by carbohydrate intolerance and that the best way to fight diabetes was to cut out all carbohydrates. Along with sugar and starches went the complex carbohydrates like brown rice and potatoes etc. The American Diabetes Association had, for decades, recommended low carbohydrate diet. In 1979 ADA saw the error of its recommendations and stated that foods high in dietary fiber should be included in diabetic meals. In Britain the British Diabetic Association stated that, "a lowered fat, increased Carbohydrate, high fiber diet is recommended for all diabetics". Their guidelines prescribed 45 to 50% of calories from carbohydrates, 20% from protein and about 25 to 30% from fat. They recommended plus minus 350 calories from breakfast, 450 from lunch and 550 calories from dinner, total for the day being about 1500 calories only. Actually, calory intake should be regulated to achieve and maintain a desirable body weight. Protein intake should be within .8g. per kg. body weight.

Dr. J. Anderson of the University of Kentucky College of Medicine in Lexington, in wide ranging experiments found that diets high in fiber and carbohydrates lowered insulin requirements and led to improvement in blood sugar. Complex carbohydrates take longer to break down into glucose. The fiber slows that breakdown even more. There is thus a more gradual release of energy into the body.

Following general recommendations are made to enable you to prevent this disease if you are in danger due to heredity or

otherwise. Diabetics can also follow these recommendations but under the supervision of their doctors. It is said that diabetes cannot be cured as such. It can only be controlled indicating the need for a lifelong discipline to keep the sugar-insulin levels under control.

1. Avoid:

Avoid sugar, honey, sweets, syrups, glucose, jam & molasses. Also avoid ice-cream, cakes, pasteries, sweet biscuits, chocolates, soft drinks, condensed milk, cream and fried foods. Fructose i.e. fruit sugar is not taken. Roasted peanuts are not good for diabetics. Raw peanuts could be taken. The use of nutritive and non nutritive sweeteners is acceptable in the management of diabetes. Salt intake should also be limited.

The renowned journal Lancet of 9th August 1986 (page 344-45) recommends that "We must persuade diabetic patients to consume less animal foods". Caffeine and alcohol act as diuretics and increase pressure on kidneys. Their use may also be reduced as far as possible. White wheat products, white rice, pasta, coconut, other nuts, unsweetened juices, eggs and whole milk should be taken in moderation.

It must, however, be understood that avoidance of these food is only to avoid aggravation of the disease. Leaving off such items of food by itself does not cure or control diabetes.

2. Obesity:

Charles Weller M.D. in his book "The new way to live with diabetes" (Double Day, New York, 1966) says that "Weight reduction and control can bring this incurable disease closer to complete remission than any medication."

Total caloric intake must be controlled. Those who are overweight must reduce their caloric intake and those who are underweight must have an adequate intake. Those who are overweight may not rule out even supervised fasting. The American Diabetes Association in its tips for diabetes self cure strongly recommends weight management as "the most effective way to treat diabetes." It is believed that obesity hinders insulin from performing.

3. Fat:

Dr. Juhan Whitaker of Huntington, California states, "The real enemy of the diabetic is fat. Fat actually tends to block the natural action of insulin." Nutritionist John Yudkin in his book "Pure White and Deadly" suggests that fat consumption may be partly responsible for diabetes. Journal of clinical Investigation 1967 at page 46 states that "really fat people have to have a very high level of insulin."

Saturated fats of butter, ghee, hydrogenated oil, coconut oil etc. must be avoided. Concentrate more on mono unsaturated oils like olive oil and peanut oil for the fat requirements of your diet. Go in for low fat and low cholesterol foods. Prefer skimmed milk in place of whole milk. Use Cottage cheese made at home from skimmed milk. In your kitchen, use non stick cooking utensils to reduce the use of fats.

4. Bitter Gourd (Karela):

This vegetable contains high dosage of "plant insulin". Investigations and tests have shown this insulin to be very effective for lowering the urine and blood sugar levels. The best method of taking this is to have juice of 3-4 karelas in between the meals. Cooked as an ordinary vegetable also it proves quite effective. It can be taken even daily. Karela is one of the best missiles in food therapy for diabetes. Use karela with the seeds. Powder of the dried fruit can also be used effectively.

5. Fenugreek (Methi):

Seeds of this vegetable have medicinal properties and the leaves of this plant have an aroma of their own. These are very commonly used for controlling diabetes in India. Effectiveness of these seeds is mentioned in Greek and Latin Pharmacopoea and also in Ayurvedic literature. A teaspoonful of these seeds can be gulped daily with a glass of water. These seeds can be used in chutney. Leaves can be used as a vegetable. Methi seeds, after a wash, can be soaked in water at night and that water can be taken first thing in the morning. Soaked seeds are dried and crushed into powder form. One tea spoon twice a day with milk could help greatly. Use Methi extensively and you will realise how useful it is. The Director, National Institute of Nutrition, Hyderabad, India recommends inclusion in daily diet of fenugreek

in amounts of 50 to 100 gms as an effective supportive therapy in the management of diabetes.

6. Jambu Fruit (Jamun):

This fruit is very effective in preventing and treating diabetes. The fruit is delicious and may be taken in adequate quantities during the season. Off season, the stone of this fruit is powdered and can be taken 2-3 gms a day. This stone contains a glucoside which prevents the conversion of starch into sugar. Dried powdered leaves of Jamun tree may be sun charged and used for controlling diabetes.

7. Garlic:

Use of garlic lowers blood sugar. Garlic is rich in potassium and effectively replaces the potassium which is lost in large quantities in the urine by diabetics. It also contains zinc and sulphur which are components of insulin. Some consider that low levels of zinc cause the onset of diabetes. Garlic also contains manganese, deficiency of which can also cause diabetes. Garlic is a panacea for scores of other diseases also. About 3-4 gms of freshly crushed garlic could be taken daily, to be gulped down with a glass of water in the morning.

8. Fiber:

Nutritionist Denis Burkitt in his book "Don't forget fiber in your diet" states that "diabetes decreases and may even disappear in people eating a traditional whole food diet". This is supported by the British Medical Journal issue of 25.12.1979 according to which "A high fiber diet induced a remission of diabetes in 85% of the patients tested". In Britain, during the years 1941 and 1954 it was compulsory to use only high fiber national flour. During that period diabetic mortality rate fell by 54%. Surveys show that Yemenites when in their native land use whole wheat and incidence of diabetes is very low but when they go out and start using refined wheat flour and more sugar, incidence of this disease rises many times. Use of soluble fiber of barley, oatmeal, fruits, carrots and dried beans helps considerably in reducing blood sugar levels. Therefore increase gradually such soluble fiber into your diet.

A report drawn up by the Royal College of Physicians in 1980

(The medical aspects of dietary fiber) suggests that diabetes can be improved by feeding chromium. It further adds that diets with their natural fiber intact contain more chromium. The report warns that refined foods may lead to a deficiency of chromium and greater susceptibility to diabetes.

Anderson J.W. in his study on high carbohydrate, high fiber diets for insulin treated men with diabetes mellitus, as reported in the American Journal of Clinical Nutrition 32:2312 of 1979, says that "70% of the diet was composed of high fiber unrefined carbohydrates. The average insulin requirements fell drastically during this regimen. Even more surprising was the fact that nearly all the overweight patients lost weight while those at a normal weight remained stationary. Many of the patients were able to discontinue insulin therapy altogether." The key is to supply the body with slow burning fuel that will not cause a sudden increase in sugar in the blood. Taking fruits is, therefore, better than taking fruit juices.

Researchers of John Radcliffe Hospital in Oxford, in March 1982 issue of Archives of Diseases in Childhood, say "Children receiving 60 grams of fiber a day were shown to have more stable blood sugar than children who received 20 grams of fiber a day". Unrefined carbohydrates and more fiber provide the answer to the problem.

9. Soybean:

German Medical Journal considers soybean with its low starch and high protein and with even high fat, valuable for diabetes. Freedendwald Ruhrah (1911) established that there was something in soybean, yet unidentified, which lowered the urinary sugar amongst diabetics. Soy lecithin contains choline which was found useful in preventing and treating neurological complications of diabetes. Use soybeans in some form or the other like tofu, tempeh, soymilk, soya powder, soy bean sprouts, nuggets etc.

10. Potassium:

Potassium intake invigorates pancreas. But potassium supplement is not recommended because it can cause ulcer. Take foods rich in potassium like raw peanuts, bananas, melons, dried peas, potatoes, apple cider vinegar, skimmed milk powder, wheat germ etc.

Prepare potassium broth with garlic, wheat bran added. Fast with only potassium broth for two days. Potassium can heal and revitalise the cells of the pancreas, without interference from other food elements. Pancreatic enzymes could also be taken therewith to assist.

11. Other Foods:

Some other foods which help in controlling diabetes are indicated below: Their consumption may be increased by all, not only to reduce the risk of diabetes but also for healthy living.

- i) Grapefruit: Grapefruit is considered an excellent food for treating diabetes. Doctors, on the basis of investigations, recommend grapefruits for diabetics and those who have a tendency towards diabetes.
- ii) Onion: because of its diuretic and digestive properties, onion works in the system against diabetes. Raw onion is more useful.
- iii) Lemon: lemon juice effectively changes the character of the consumer's blood and thereby helps retard diabetic tendencies.
- iv) Certain Vegetable: all vegetables which contain less than 3% of carbohydrates help in preventing and controlling diabetes. Lettuce, cucumber, radish leaves, bathu leaves and spinach fall in this category.
- v) Neem Leaves: dried tender leaves of neem tree are used in some communities for preventing and controlling diabetes. These are used in small doses of about a gram a day only. Leaves should be dried in shade and powdered.
- vi) Urad (Black gram): investigations conducted at the Central Food Technological Research Institute, Mysore, India showed that ingestion of urad dal with the usual diet helps to lower the blood sugar level. Milk made by grinding sprouted whole urad is also good for diabetes.
- vii) Turnips: this vegetable is very low in carbohydrates and has no starch. Its sugars can be reduced further by a few boilings and then it becomes a very useful food for diabetics.

- viii) **Bengal Gram:** extract of bengal gram (Chana) e.g. soup etc helps in utilising the glucose in the body. Taking of the extract of chana has been known to reduce the intake of insulin by diabetics to almost half.
- ix) **Banana:** June 16, 1934, issue of the Journal of American Medical Association says "Banana and skimmed milk furnish a simple and effective method for weight reduction in treating patients for diabetes." Unripe banana cooked as a vegetable is extremely good for diabetics.
- x) **Sauerkraut:** Sauerkraut prepared from cabbage is considered a very healthy food which cleans the stomach thoroughly. It is used by many physicians to control diabetes.
- xi) **Some Teas:** Parsley tea has been known to drop the sugar level to normal. Blueberry leaf tea is also useful for diabetes. Tea made of tender walnut tree leaves is used in certain communities for controlling diabetes. Water in which kidney bean pods have been cooked is good for diabetes.
- xii) **Almond Meal:** whatever is left of almond after extraction of oil is specially good for diabetes. It has no starch.
- xiii) **Artichoke:** the Jerusalem artichoke, a tuberous root with a top like a sunflower is recommended because of its high insulin content to patients with diabetes or a tendency to diabetes. It could be taken raw in salads.
- xiv) **Brewer's yeast:** This wonder food helps the pancreas produce more insulin. This in turn is due to its biologically valuable concentration of the trace mineral chromium. It is likely to be one of the best supports for normal body handling of sugar. According to the paper of Dr. Richard J. Doisy and others in the Medical World News of 11 Oct. 1974, "Brewer's yeast has lowered the insulin requirements of many diabetic patients".
- xv) **Pectin:** According to Diabeteset Metabolisme Vol. 8 No. 3 1982, French research has demonstrated the usefulness of apple pectin in insulin dependent diabetes. The pectin effectively reduced insulin needs by 35 per cent.
- xvi) **Legumes:** According to June 1982 issue of the American Journal of Clinical Nutrition, the lentils and other legumes

are particularly effective in a diabetic diet because of their slow release of energy

- xvii) (a) Yogurt: Yogurt injects friendly bacteria into the digestive system that stimulates pancreas. It also washes pancreas of its acids and wastes. This cleaning action enables the pancreas to perform much better.
- (b) Butter Milk: Butter milk contains lactic acid. It influences secretion of the pancreas and helps control blood sugar levels.
- xviii) Fresh Tart Fruits: Even raw fruits, like other raw foods, to a certain extent, stimulate the pancreas and increase insulin production. Dr. Irving Rasgon and Dr. Douglas describe some diabetics who went on diets which were 90 to 100% raw. They were able to completely discontinue medication. According to one saying, "the wise diabetic chooses a dessert of fresh fruit". But fresh tart fruits are different. Tart fruits and their juices are considered "natural medicines" for curing and stimulating the pancreas to increase insulin production. Tart apples, cranberries, other tart berries, tart citrus fruits, all are invigorating for the pancreas.
- xix) Giloe (Tinospora Cordifolia): The starch of this plant is very useful. Its stem is crushed into a paste, mixed with water and exposed to sun. Three to four grams of this powder every day helps. When this creeper has climbed neem, it becomes doubly effective.
- xx) Some condiments: Food and Nutrition Research Briefs of Jan. to March 1990 indicate that "In test tubes, cinnamon, turmeric and cloves etc. have triple insulin's ability to break down blood sugar". Use of turmeric and gooseberry in equal quantities in powder form taken with warm water is very useful in this behalf. These activate the pancreatic cells and more insulin is produced. Western scientists do not yet know whether these condiments work in the human body as well. In India, turmeric in milk is used by some diabetics with good results. Potassium content of turmeric is the highest of any other food. Its role in diabetic diet cannot be exaggerated.

- xxi) **Bael (*Aegle marmelos*):** The leave of the bael tree when chewed are very useful in diabetes. Pulp of this fruit could be dried and taken in doses of 5 to 10 gms. a day.
- xxii) **Diabetes flour:** There are a number of wholegrain cereals and lentils which help to lower the blood sugar level. To facilitate intake of all these on a regular basis, in countries where bread is made daily at home, flour could be prepared of the mixture of such cereals etc. Flour made of a mixture of equal quantities of soybean, black gram (Urad), jowar, bajra, bengal gram (Kala Channa), wheat bran and barley and half quantity of almond meal could be profitably used to make chapatis etc. Bread could even be baked from such a mixture.

12. Supplements:

Vitamin C: Dr. George V. Mann in "Prospectives in Biology and Medicine" 1974, recommends extra vitamin C for the diabetics. Natural insulin output has increased when diabetics have taken supplementary vitamin C. One man was able to stop his insulin injections altogether by taking 4 gms of vitamin C a day. That may be an extreme case. But intake of vitamin C in the form of dried amla or tablets of 500 mg from natural sources is recommended.

Vitamin E: This vitamin is very valuable for diabetes. It reduces considerably the devastating vascular damage accompanying this condition. Dr. Wilfrid Shute in his "The complete book of vitamins" recommends 800-1600 i.u. of vitamin E a day to prevent the massive arterial degeneration in diabetes. Swedish tests also support this therapy. Vitamin E can also help diabetics to decrease their insulin requirements. A daily dose of 200 i.u. of Vitamin E is recommended for periods of a fortnight at a time.

Chromium: Columbia University Scientists in a study reported in the American Journal of Clinical Nutrition of April 1980 establish chromium's benefits for Type II diabetes. They confirm that chromium enhances insulin production by the body. Some other researchers also confirm that chromium helps to stabilise blood sugar and increases energy. Whole grains, seeds, mushrooms, corn oil and brewer's yeast are relatively good sources of biologically valuable chromium.

Vitamin A: Diabetics cannot convert beta carotene to vitamin A. A supplement of this vitamin, therefore, becomes necessary. A dose of 15,000 i.u. on alternate days is considered adequate by some.

Vitamin B: Strangely enough, it is desirable for diabetics to avoid large dosage of vitamin B because this vitamin interferes with the absorption of insulin by the cells.

13. Smoking:

In the human body glucose cannot be metabolised without oxygen. In smoking the carbon mono-oxide of the smoke uses most of the oxygen in the cells and insufficient stocks of oxygen are left in the body for metabolising glucose. Smoking must be stopped by diabetics.

14. Small meals:

To ensure gradual release of energy, diabetics should take small meals 5-6 times a day instead of the usual 3 times a day. Calories in each meal should be consistent and so the timings of the meals. Diabetics have a tendency for overeating and towards acidity because of slowed down protein and fat metabolism. Diabetics' diet should, therefore, be alkaline and overeating avoided. Diet plan should be fixed in consultation with the doctor.

15. Consultations:

Even when the diabetics try to control their blood sugar levels by food therapy, they should consult physicians frequently about their blood sugar levels to ensure that the blood sugar does not go below the desirable level.

EXERCISE

A.P. Dewan

Exercise was the recommended therapy for diabetes in India as early as 500 BC. American Diabetes Association very strongly recommends exercise as the most effective way of controlling diabetes. According to the association "Exercise appears to help muscle cell take up and use sugar, even when there are lower levels of insulin in the blood."

In New England Journal of Medicine issue of 29.11.1979 Dr. Vijay R. Soman of Yale University says "The data in this study suggest that physical training can be valuable in the treatment of obesity and non insulin dependent diabetes because it augments tissue sensitivity to insulin, whether or not it causes weight loss". Dr. R.C. Cantu in his book "Diabetes and Exercise" says, "Can diet and exercise prevent diabetes? The answer to this question is an emphatic yes." And, Rev. Karl Baehr in Diabetes Forecast of Nov.-Dec 1983 very effectively asks the question "How long can you mope and pine after disaster? You have got to ultimately pick up your life and sing," Singing in this case, includes, besides diet regulation, exercise.

Exercise helps the diabetics in many ways. ^① It reduces the triglycerides and LDL in the blood. Secondly, ^② Exercise helps decrease excess fat and thereby increases the body's cell sensitivity to insulin. Thirdly, ^③ Exercise increases the receptivity of muscles to insulin and greater amount of glucose will be transferred from the blood stream to the muscles by the same amount of insulin. This is the greatest benefit of exercise to diabetics besides what good exercise does to an ordinary person. And do not forget that when you exercise, you send oxygen to pancreas also and thus you stimulate your pancreas to function better.

Physical activity will burn blood sugar as fuel and lower its body level. If exercise is done for more than 25 minutes, your muscles are enabled to store glucose, and thereby lower the blood sugar level. With consistent physical activity the ability of cells to use insulin also increases. Exercise thus builds physical fitness.

In the human body, glucose cannot be metabolised without oxygen. Without oxygen, the level of glucose in the blood rises. Get oxygen by exercise. There is no other better way!

But please note that exercise is not recommended when blood sugar level is very high. Moreover, if within four minutes after stopping exercise the pulse rate or breathing do not return to normal, it means you are over straining. Take it easy. Insulin dependent diabetics should also be encouraged to exercise. In their case exercise should be light and to cover any risk, self monitoring of blood glucose may be incorporated in their exercise programme. Generally, the effect of exercise in lowering blood sugar level, lasts for about four hours.

Exercise aerobically for a minimum of three days and normally for six days a week. Exercise should be done in open air with half naked body. Exercise should be stopped about one hour before a major meal and started only after two hours of such a meal. There should always be a warming up period in the beginning and a cooling down period at the end. Exercise for 30 to 60 minutes at one time is sufficient. Isometric exercises involving lifting of weights etc. are not recommended. Aerobic exercises like walking, cycling, swimming etc. are more useful. Avoid exercise in extreme heat and cold.

Walking is the best exercise. For exercise walk continuously for 20 minutes at a stretch at least. Walk briskly and vigorously, breathing deeply and rhythmically, in pollution free areas. Do not exceed your limits of endurance which you alone know best. You could then increase the distance, speed and duration gradually. While walking, both the arms should continue to move in a natural manner. This movement strengthens the muscles of heart, lung, chest and back. Morning walks are the best. Emerson says in his Journal of 1836, "In the morning a man walks with his whole body, in the evening only with his legs."

The following two exercises are likely to help the pancreas:

1. Back Exercise: Lie flat on your back. Bring the feet nearer the thighs thus raising the knees, the feet remaining flatly on the ground. Now:-
 - i) Attempt Mula Bandha by contracting the region between the anus and the scrotum. Now press the portion between the first and the tenth vertebra against the ground. Keep it like that for about ten seconds. Then let go for five seconds. Repeat this five times.
 - ii) Thereafter, while keeping the knees raised, raise the portion between the first and the tenth vertebra up from the ground in the form of a small concave, while keeping the rest of the body on the ground. Keep it up for about ten seconds. Then let go for five seconds. Repeat this five times.
 - iii) Do as at (i) above, then hold one leg at the knee (not at the calf) with both your hands and bring the knee up with thigh touching your chest. Keep it like that for about ten seconds. Then let it go. Hold the other leg at the knee and bring that knee up to touch the chest. Keep it like that for about ten seconds. Repeat once again for both the legs.
 - iv) Repeat (ii) above five times. Thereafter rest for about 30 seconds before getting up.



2. Heel-toe walk: Draw a straight line on the floor. Stand erect with your left foot along that line. Tense your buttocks and abdomen. Hold out arms to aid in body balance. Walk 15 steps along that straight line, right foot should be so placed directly

in front of the left foot that the right heel touches the left big toe. Then place the left foot in front of the right, heel to toe. After 15 steps walk backwards toe to heel, along the same line up to the starting position. This exercise improves the balancing posture which in turn activates pancreas.

3. Deep breathing: Shallow ineffective breathing is one of the causes of a disenchanted pancreas. Deep diaphragmatic breathing will set things right. Diaphragmatic breathing can be learnt from an infant in deep sleep. Its breathing has a rhythm and a melody. With every inhale the abdomen goes up and on exhale it goes down. Watch it for a few days, then it will happen automatically because that is the natural method of breathing.
4. Skin brushing: Brush the entire body vigorously at least once daily, either dry or at the time of bath with a medium to firm bristle/plastic body brush. Alternatively a small sponge stone or the inside of fibrous frame of dried gourd could be used for rubbing. It will open all pores for elimination of toxic matter and for intake of oxygen. It will provide blood circulation even to the minor blood vessels near the skin. This exercise gives disproportionately high dividends.

Yoga asanas and pranayam which also exercise relevant parts of the body are dealt separately.

YOGA

Shri Surya Mohan Thakur

A Research Officer Yoga, CCRYN.

Yogasanas are the foremost amongst exercises for your muscles and joints and for massaging your other body organs. Yogasanas are for keeping the body healthy and mind peaceful. These asanas were developed thousands of years ago on the basis of the practice of centuries and are very useful for the physical, mental and spiritual development of man. Asanas provide exercise to the glands, muscles, ligaments and nerves, and help them to keep in good health. The objective of the Yogasanas is to make this physical body an appropriate temple for the abode of the soul.

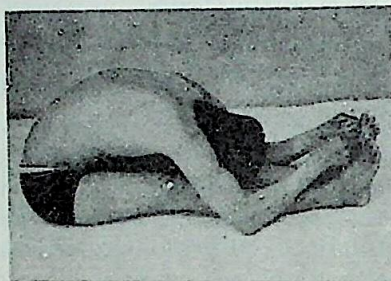
Asanas may be practised in the mornings or evenings on an empty stomach or after a drink of water, tea etc. Asanas should be practised only after one hour of a refreshment or after three hours of a major meal. A diabetic should eat something immediately after asanas. Asanas should be done in a clean airy place where there are no insects and no noise either. Spread a folded blanket on a level ground and practise on it. Facing east or north you benefit more from the electromagnetic system of the earth. During asanas always breathe through the nose. Never stop breathing. Always breathe normally unless otherwise directed. During asanas there should be no tension on your face or in other limbs. Breathing should not be laboured. It would be better if you do jalneti before starting asanas. Dress should be light, loose and airy.

Yogasanas do not cure diabetes as such. But some of the poses activate thyroid gland, some, by flexing the spine, stimulate nerve impulses to pancreas, some massage the pancreas and

others affect the whole metabolism in such a way that they see the healing energies of fresh circulation going to the pancreas. The following asanas help:

Paschimottanasana (Back of the body pose):

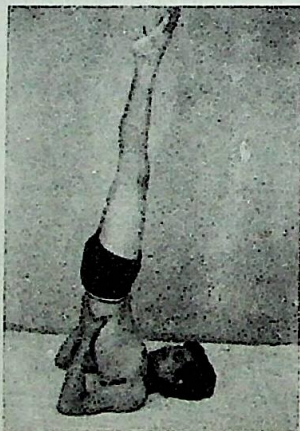
Sit with legs stretched in front. Extend the arms and catch both the big toes between the thumb and the first two fingers of the two hands. Pull the neck backward. Bend the elbows, bring the trunk forward and touch the knees with your forehead. Stretch the neck and the trunk so that you touch the knees with your



nose and then with your mouth. After sometime, try to hold the sole of your feet with your hands and bring your chin to touch the knees. In the initial stage you could even rest the elbows on the floor while holding the big toes. While taking every new step, first exhale.

Sarvangasana (whole body pose):

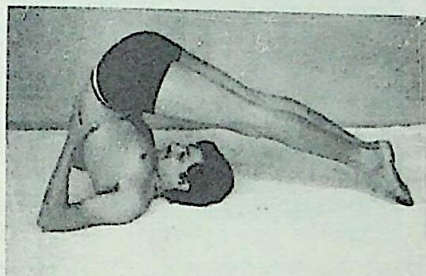
Lie on the back with hands by the side of the legs. Tighten the



knees, palms facing downwards. Bend the knees and move the legs towards the stomach. Exhale slowly and raise the hips being supported by the hands, with the arms bent at the elbows. Trunk should be perpendicular to the ground and the chin should be touching the chest. Hands should support the middle of the spine and the legs should be stretched straight with toes pointing upwards. Hold for four to five minutes. Gradually increase this time to ten minutes. Breathe normally. Gradually slide down while exhaling.

Halasana (Plough pose):

Practise sarvangasana. Move the legs over the head and rest the toes on the floor. Keep the legs straight. Remain in this pose for two to three minutes, breathing normally. In this pose, you

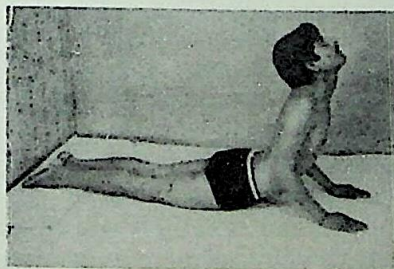


could lower the arms and stretch them in the direction opposite to that of the legs.

Besides the benefits of the Sarvangasana, the abdominal organs are rejuvenated and the back receives extra supply of blood.

Bhujangasana (serpent pose);

Lie with the face downwards. Keeping the feet together, extend the legs. Knees should be tight and the toes pointed. Keep



30

the palms on the ground near the pelvic region. After inhaling, press the palms and pull the trunk upwards. Keep the body lifted with the pubis in touch with the floor. The entire weight should be on the legs and palms. Contract the anus and buttocks and tighten the thighs. Breathe normally. Revert after thirty seconds while exhaling.

Dhanurasana (Bow pose);

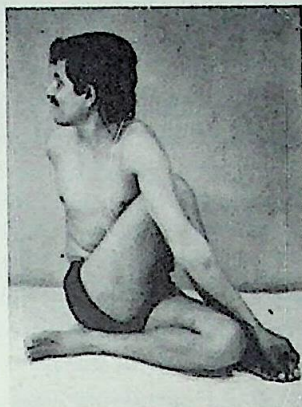
Lie with the face downwards. Bend the knees upwards. Take the arms back and hold the left leg at the ankle with the left hand and the right leg with the right hand. Exhale completely, raise the knees above the floor, pull the legs and lift the chest off the



floor. Do not join the legs at the knees. The body takes the shape of a bent bow, the arms and hands acting like a bow string. Lift up the head. Pull it as far back as possible. The abdomen should bear the entire weight of the body on the floor.

Ardh Matsyendrasana (half spine twist pose):

Sit with the legs stretched straight in front. Bend the right knee so that the calf is touching the thigh. Raise yourself and put the right foot under the buttocks, keeping the foot horizontally on the floor. Then lift the left leg, bending the knee and place it on the floor by the outside of the right thigh. The trunk of the body may be turned to the left as much as possible. The right armpit would come over the left knee. Twist the right arm around the left knee and move the right wrist to the back of the waist. Bend the left elbow backwards behind the waist and try to clasp the right hand. Turn the neck to the left and look over the left shoulder. Due to the spinal twist there will be some difference in the breathing style. It will become normal after some practice.

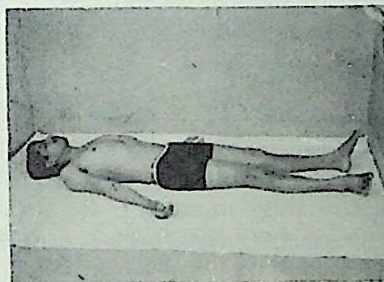


Hold on for about 30 seconds. Then release the hands, lift the left foot from the floor. Straighten the left leg and then the right leg. Repeat with the other leg bending first as in photo.

Savasana (Corpse pose)

This pose appears to be very easy but in reality it is difficult to practise correctly.

Lie on your back like a corpse, with your hands a little away from the body, with palms facing upwards. Keep the heels together with toes apart. Close the eyes. Start deep breathing but



it should be fine and slow. During exhalations, there should be no feeling of warmth of the breath at the nostrils. Relax completely. The jaw should be loose. There should be no movement of the pupils of the eyes. Pacify the mind. Give auto-suggestions for inducing perfect relaxation. Stay in this pose for about 5 to 10 minutes.

Following pranayans are good for diabetics:

Nadi Shodhak Pranayam:

For this pranayam you could sit in any yogasan or even sit on a chair. Keep your spinal chord straight right from the base of the spine upto the neck. Lower your chin so much so that it may almost be touching your collar bone, keep the left hand in Gyan mudra on the left knee. Turn the right arm from the elbow onwards. Then turn the first finger and the middle finger of the right hand inwards towards the palm. Then bring the small finger and the one next to it together towards the thumb. Keep the right thumb on the right side of the nose and keep the small finger and the one next to it, on the left side of the nose. Close the left nostril with both those fingers and exhale fully through the right nostril. Now starts the first round of this pranayam. Keeping the left nostril closed, inhale. After inhaling deeply close the right nostril with the thumb and open the left nostril and then exhale slowly through the left nostril till the lungs are absolutely empty. Now without a pause, from that very left nostril inhale deeply and slowly. Thereafter without a pause, close the left nostril with the small and the next finger and open the right nostril and exhale slowly and steadily through the right nostril. This completes one cycle. For the second cycle, inhale through that very right nostril. You can complete eight or ten cycles in this way. No sound should develop while practising this pranayam. It should be noiseless. Time taken in inhaling should be the same as taken for exhaling.

With this pranayam there is cleansing of the nadis (internal tubular ducts) from within. No obstacles remain in those ducts. Even the smallest obstacle could be a hindrance in the way of proper breathing. By this pranayam not only are the nadis cleansed but simultaneously blood starts getting more oxygen and you feel refreshed. The mind is at peace with itself and becomes clear. This pranayam can be practised at any time of the day. Perhaps you may like to do ten cycles each in the morning and at bed time and do five cycles once more during the day. Swami Vivekanand quoting Shankaracharya's commentary on Shvetashvatara Upanishad, lays great emphasis on this pranayam saying "First the nerves are to be thus purified. In 15 days or a month purity of the nerves is attained"

If you practise jalneti every day and do the Nadi Shodhak pranayam also every day as suggested above, then not only will the cleansing through elimination be great but you will never catch cold or allergy. This will help you in treating all diseases connected with the nose and the brain.

Ujjayi Pranayam:

Besides the pranayam mentioned above, Ujjayi pranayam is the only other pranayam for the learning of which you do not need direct supervision of any guru. This can be practised at all times of the day while sitting, standing, walking or lying.

For this pranayam also keep the back straight and upright. If possible, close your eyes and draw the senses in. Then exhale completely and inhale deeply, steadily and slowly through both the nostrils and feel the incoming air against your palate and listen to the 'Sa' like sound that air makes. Fill your lungs completely. The abdomen will definitely go up but do not bloat it too much. The abdomen should rather be drawn in towards the spine. Then exhale steadily and slowly through both the nostrils. Keep the abdomen under control. Again feel that the outgoing air is touching the palate. It will make a "ha" like sound. Listen to that. This completes one cycle. Practise this pranayam for about 5 to 10 minutes. In this practice so much of oxygen will go in and so much carbon will come out that the whole body will feel invigorated especially the thyroid glands. This pranayam can be done with Jalandhar bandh and also by holding in or out for a couple of seconds with greater advantage but this practice of holding the breath in or out should be learnt under the guidance of an expert

Bhastrika Pranayam:

The bellows used in a furnace is known as bhastrika. In this pranayam air is forcefully drawn in and sent out as by the bellows. Stand erect. For this pranayam bend forward. Bring the body from the waist upwards so as to make a 90° angle with the legs. Then take a fast and vigorous breath and then send it out quick and forcefully. In doing so you will create a sound similar to that of the working of the bellows. Repeat 10 or 12 times. Then slightly raise the body from the waist upwards and repeat the same cycle. In this way the water retained in the nooks and corners will come out. After this, practise Savasana for some time.

Kapal Bhati Kriya:

This is done almost like Bhastrika pranayam, difference being that in this action the emphasis is only on exhaling forcefully and vigorously. Exhale forcefully and throw the breath out. Do not make a conscious effort to inhale. Inhaling will take place automatically. Please watch out that the shoulders do not move in this. Repeat this action in four postures ie. by keeping the neck turned upwards, downwards, leftwards and rightwards. This action improves the memory. It gives relief in asthma also.

HYDROTHERAPY

Dr. Hira Lal

Secretary General, International Foundation of
Natural Health and Yoga

Hippocrates (about 500 BC) was the first to write on the healing of disease with water. Floyer, in the 18th century, published a history of some remarkable cases cured by means of special baths. In 1723, Mr. Hancock, a minister, published a book called "Common Water, the Best Cure for Fevers." Another book "Curiosities of Common Water" was also published in the same year. S. Kneipp, a catholic priest of Bohemia achieved great success with water cure. It was, however, left to Dr. Benedict Luse to publish "S. Kneipp's water and herb cure" towards the end of the 19th century. That is even now considered a standard work on the subject along with "Rational Hydrotherapy 1900" of Dr. J.H. Kellogg of Philadelphia USA.

Importance of water treatment for human health is illustrated by the costliness and magnificence of bathing facilities created by Persians, Greeks, Romans, Turks and others. Galen, a noted Latin physician, said that exercise and friction must be used with the bath to have a perfect cure. Dr. Bell of Paris is on record as saying that in 1600 A.D. 130,000 vapour baths were given in one single year by the Paris city hospitals to outside patients. What a contrast with the present day neglect of water cure in our treatment of disease. The water cure spread to USA also in about 1850 AD. It prospered greatly for a few years. But because it was inexpensive and could be had even at home, it met lot of opposition from the organised sector.

No other element of nature, except air is as important for sustaining life, as water. All food contains 10 to 90 per cent water.

Our circulatory and elimination systems are dependent on water. With the aid of water, nutrition enters the blood and is conveyed to places where repair and growth are needed. Rain provides the natural shower bath. And see the difference how fresher, brighter and more erect looks the entire plant kingdom after a rain.

Disease is accompanied by some disturbance in the circulation system. To balance the circulation, application of cold water contracts the small blood vessels and lessens the amount of blood. Hot water application draws surplus blood to that part. Accumulation of toxins and wastes is another cause of disease. Warm water baths remove obstructions. A long cold application will cause a momentary contraction which is followed by relaxation when there will be an increased supply of blood.

Hydrotherapy thus affords a thoroughly rational method of treating diabetes by increasing the effectiveness of pancreas and increasing circulation to the relevant parts of the body. This method is safe, can be relied upon and can be repeated without losing its effect.

In cases of non insulin dependent diabetes, some of the following hydrotherapy actions can be taken:

1. Warm Shower on abdomen: Direct a warm shower on to the abdomen for about 10-15 minutes. Gradually increase the warmth of shower to what can be tolerated. The skin will then turn red. That is a sign that the pancreas has been stimulated by the hot shower. Its insulin production will be boosted.
2. Hot Baths: If one lies in a tub of hot water for about 20 to 30 minutes, it helps to eliminate the waste matter and even sugar from the system. Water could be as hot as one can stand. One could top it up with a cup or two of hot tea while in the tub. After a long period in a hot tub, have a shower with cool water and then get back into the hot tub. This could be repeated a couple of times. Finish with a cool shower and a vigorous rub with a hard towel. A general massage with such a bath could be useful and helpful in a number of ways.
3. Serial bath: Put a bucket half full of hot water under an ordinary tap. Take water from this bucket with a towel and rub it well on the body. Gradually the water thus taken for rubbing will become cold. Then take a bath with that water by putting it

with a mug on the head. Dry the body with a towel and give a rubbing to the body with the palms of the hands.

4. Heat producing stomach bandage: Take a bandage about 3 meters long and 30 centimeters wide of thin cloth. Put the bandage in cold water and squeeze it dry and bind it around the stomach two or three times. Then wrap a woolen dry cloth over that bandage and tie it with a tape or a strap. Leave it for an hour or two. Heat will be generated resulting even in perspiration.

5. Cold friction Sitz bath: Sitz or hip bath was first devised by a German Loui Kuhne. You need a tub for this kind of bath. There should be as much water in it as would come upto you navel when you sit in the tub. Your back should rest against one side of the tub and your legs should protrude out of the tub on the other side. Your feet could rest on a stool. In this way the part of your body from the navel upto the middle of thigh will be immersed in water. While sitting in the tub you rub your abdomen with a rough towel from left to right and then from right to left. Take such a bath for 5 to 20 minutes at a time. Gradually increase the duration of the bath from 5 to 20 minutes. On getting out of water, dry the body by rubbing with a dry rough towel and put the clothes on. Ordinary bath should be taken only after an hour of this hip bath. After hip bath either sit in the sun, do some exercise, stroll or take a blanket and lie down for half an hour. In this way the cold of the body would go. Cold hip bath may first be taken with water at 26°C (80°F) and then gradually brought down to water at 15°C (59°F).

6. Wet sheet pack: In this the naked body of the person is covered from ankle to neck with two layers of cloth. For doing this, spread a thick sheet of cotton cloth on a full sized bed. Then spread two blankets and on that a thin wet-sheet and a trunk cover cloth. The body is packed in a thin wet sheet and then a trunk cover and then with the blankets and lastly by the thick dry sheet respectively upto the neck. These packs should be retained till perspiration appears. Then take an ordinary bath with cold water and dry the body thoroughly.

7. Cold friction bath: Take cold water in the palm of the hand and rub it well on the body with a soft touch till it gets dry. Again take more cold water and rub it dry. Thus rub the whole body. It has a soothing effect and increases blood circulation considerably.

8. Hot and Cold: A similar stimulating effect could be achieved by applying a hot compress for 4 minutes followed by a cold compress for one minute, alternately for 3-4 times, beginning with hot, not warm, and ending with cold, not cool, compress. Similar hot and cold foot baths would help local circulation and ward off foot trouble. After every change add more hot and more cold to the water or compress to get good results,

While following some of the above mentioned hydrotherapeutic procedures off and on, do not forget to take the daily cool morning bath, followed by rubbing with a cold wet towel and then equally vigorously with a dry towel.

COLOUR THERAPY

Shri P.L. Aneja
Colour Therapy Specialist

Sun provides one of the five elements of the body. It is the source of all life on earth. Sun-light is a combination of all colours of the spectrum, visible and invisible. Sun worship and sun bathing date back to antiquity. The love of basking in the sun seems to be common to all living creatures.

Sunlight has been recognised as a powerful factor in building and maintaining health. The system of building health with the help of the sun and its different rays is known as heliotherapy or solar therapy or chromo-therapy or colour therapy. It is a drug-less system.

Light travels at 1,86,000 miles per second. The seven colours of the rainbow i.e. violet, indigo, blue, green, yellow, orange and red (Vibgyor) are due to their different wave lengths. There are some invisible colour wave lengths also. Three colours on one extreme i.e. violet, indigo and blue are cooling and soothing in nature. Three colours on the other extreme i.e. yellow, orange, and red are hot and stimulating in nature. The green colour of the spectrum is a harmonizing colour. It maintains balance between the hot and cooling colours.

The classic work "The Principles of Light and Colour" written by Dr. Edwin D. Babbitt, published in 1879, is one of the master pieces on colour therapy.

Recently Dr. Alexander Schauss, Director, The American Institute of Bio-social Research in Tacoma, Washington has stated that "These bands of light energy stimulate the pituitary and pineal glands, regulate hormones and other physiological sys-

tems in the body" These findings have been consistent even in those with visual handicaps & blind. Colour is a form of energy that produces physiological changes. The Changes are not the result of psychological or cultural factors". In one study in U.S.A. children prone to tantrums and aggressive behaviour became calmer after being in a class room painted blue. Interestingly both blind and children with sight, reacted the same calm in the blue surroundings. These findings support Dr. Schauss's theory that colour responses are physiological rather than psychological or cultural.

Pythagoras is said to have used colour therapeutically. In ancient India, colour halls are reported to have been used for healing. Linda Clark in her book "The Ancient Art of Colour Therapy" attributes the following colours to various vitamins:

Vitamin A	Yellow	Vitamin D	Violet
Vitamin B 12	Red	Vitamin E	Scarlet
Other Vitamins B	Red & Orange		
Vitamin K	Indigo	Vitamin C	Lemon

Most yellow foods are rich in Vitamin A and Yellow and Green foods rich in Vitamin C. Viability and effectiveness of colour therapy have been scientifically established and accepted.

There are various methods of using colour for health. Charging water/oil are two frequently used methods. Short time exposure of the body to the sun is another method. Charging the air in coloured empty corked bottles and then inhaling the charged air (colour breathing) also helps. Visualisation of a particular colour during meditation is another method.

Lemon yellow is the colour of the pancreas. It is associated with bouyancy and it is used to control diabetes. Mainly green and orange colours are helpful in controlling diabetes.

Green is the Nature's colour. It stimulates the pituitary gland which in turn stimulates the thyroid gland. It also stimulates the elimination of the toxic matter. Take green charged water in the morning on an empty stomach and before major meals. Also gargle with green charged water. Eyes should also be washed with green charged water.

Orange colour breathing may be done. Keep an orange empty

corked bottle in the sun on a wooden piece for about an hour. Then take out the cork and put the mouth of the bottle in your mouth and inhale the sun charged air of the bottle for a few minutes. Repeat it thrice daily. A cup of sun charged orange water may be taken about 15/20 minutes after every major meal.

Rub sun charged orange water on the abdomen and cover it with red colour cellophane paper. Take early morning sunshine on the abdomen for about 15-20 minutes. Drops of perspiration are likely to appear.

Leaves of the jamun tree may be dried in shade and powdered. Two bottles, one green and one orange may be taken and filled half with that powder. These may be corked and placed on an unpolished wooden piece in an open place exposed to the rays of the sun. it will stand charged after 30 days. A teaspoon from each of those bottles may be taken with half a cup of orange charged water in the morning by diabetics.

Diabetes is generally caused by deficiency of orange and yellow colours in the body. Take fruits and vegetables which have these two colours in abundance.

For preparing green charged water, take a green bottle. Fill 3/4th of it with potable water. Cork it. Put it on an unpolished wooden piece in an open place exposed to the rays of the sun. Keep it in sun for a minimum of 8 hours. Green charged water is ready. This will be indicated by the appearance of droplets on the inside open surface of the bottle. For preparing orange charged water use an orange bottle.

ACUPRESSURE

Guru Shri Bipin Bhai Shah, Bombay

Our body is held together by the "pranas" i.e. the life force, continuously recuperated by the body element "aakaash" (ether). That life force moves along meridians, which are electric pathways in our body, connecting various organs and glands with endings in our hands, feet and some other parts of the body. As the arteries carry blood, so do these meridians carry electrical energy throughout the body, through a master system. All the senses and even physiological and emotional aspects are connected. This electrical system has switches and junction points which could be activated to supply this life force to various parts of the body.

When this life force does not uninterruptedly flow to certain parts of the body, disease develops. The remedy lies under this system of acupressure in switching on the current to the affected part by applying pressure at a corresponding point located in the hands, feet or elsewhere in the body. Acupressure and acupuncture use the same points. Asian cultures conceived of these points as junctions of special pathways that carried the human energy that the Chinese call Chi and the Japanese call Ki. Western scientists have also mapped out and proven the existence of this system of body points by using sensitive electrical devices.

In acupuncture these points are stimulated with needle and electricity. Acupressure, however, continues this method of self treatment by pressing the points whereby muscular tension is released, blood circulation is promoted and most important of all, the body's life force or electrical energy is carried to the affected part to aid healing.

When these points are stimulated by pressure, needles or heat, the release of endorphines, the neurochemicals that relieve pain, takes place. In this way pain is blocked and the flow of oxygen and blood to that part increases. Acupressure points corresponding to a diseased part or body disorder would always be tense and even so tender that a mild touch will cause pain. Acupuncture with its skin piercing needle technique is for trained persons. Acupressure is for everybody.

There are several theories as to how acupressure benefits the body. Acupressure, by releasing muscular tension, creates an "alpha wave" response in the brain. This deep relaxation induces greater circulation and a consequent reduction of toxins within the body. Acupressure also stimulates the pituitary gland, resulting in, as indicated earlier, release of endorphines. These chemicals manufactured within the body relieve pain, promote healing and increase our energy stock. With the arrival of life force, the organs and the degraded muscles blossom forth to active normal working.

Acupressure is still expanding and growing. New discoveries are coming out of China. There are reports of new points for acupressure from Czechoslovakia, England, France, Soviet Union, Japan and some other countries. In India also, Acupressure was known to the ancients.

While applying pressure, resort to diaphragmatic deep breathing. Visualise breathing life-energy into the point. Apply finger pressure in a low rhythmic manner. Slower pressure creates a deep relaxing effect. According to one School, all points should be pressed three times and for three seconds each time. Some others feel that the acupressure point should be pressed deep for one minute and once only. There are some who would press twice and for 7-10 second each. All these methods get almost similar results. It is better to press the thumb deep into the point and rotate it smoothly for about 20 seconds. Leave the point with a jerk.

Following points when pressed are likely to result in reduction of blood sugar in your case also.

- 1) Pressurè points in the centre of the palms in alignment with the bottom of the ring finger. This point is also for stimulation of the pancreas.

2) Pressure point on the soles of the feet, one third from the base of the toe next to the big toe and two thirds up from the heel. This point is also ~~for stimulation of the pancreas~~. In zonal therapy reflexes consist of a band extending all across the foot, a little over half way up the foot.

In case of the diabetics all the above pressure points are likely to be tender on being pressed. If in doubt about the location of the point, apply the general rule that where you find tenderness and soreness, massage in case of the zone and press in case of the reflex pressure point.

For control of diabetes, reflex points of pancreas, liver and kidney, as shown in the diagram given below should also be pressed.

MUDTHERAPY

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Earth provides us with food, our main source of energy. In nature cure we make full use of the element earth in the form of mud or clay packs or poultices or even mud baths for preventing and treating various diseases by bringing out poisons from the body, for cooling the nervous system and for activating various organs of the body.

In diabetes there is disturbance of the metabolic processes of the entire body. When the digestive system and endocrine glands do not work fully, the result is accumulation of impurities and toxemia in the body. Improving elimination and removal of the toxins becomes important.

European hydropathic or nature cure enthusiasts are enamoured of mud bath treatment for such a condition. There are different ways of taking mud treatment. One way is to use moist clay when obtainable, rather than ordinary mud. The clay should be of such a consistency that it can be plastered on the body. Sometimes, it is to be held about the body by loose cloth wrapping. The clay, in winter, should be sufficiently warm to ensure comfort.

Another method of taking the bath is to allow the person to lie in a special tub, covered upto the chin in mud as thick as soft pulp. The mud should be analysed to contain alkaline elements. These elements stimulate the skin and the circulation in and under the skin. In such a case skin cannot absorb minerals in the mud but the good effects are due to skin stimulation.

Another material used for poultice or mud bath is received from volcanic regions. It is sold commercially in dry form. It is heated and moistened before use till it is of a thick pasty consistency.

This paste is thickly applied to the abdomen and liver and those parts of the body which need treatment. The patient is then wrapped in towels or sheets and remain in his mud envelop for about 30 to 90 minutes. The mud is then washed off with a shower and the skin rapidly dried.

In the absence of this commercial mud, ordinary white clay can be applied. Some of the finely sifted clay is made into a plaster with the addition of boiling water. It is then evenly spread about half an inch (1.25 cm) thick directly to the skin.

As an alternative, mud bath can be had with the earth taken from a place which has been exposed to direct sunlight and open air and which has been getting good water and where no artificial fertilisers have been used. From such a place take earth from a depth of 50-60 cms (1.5 to 2 ft.) Mix some sand and water with such earth. Within about 18 hours that mud will become alive and fit for use. Take mud bath with it. In the morning apply that mud to the whole body and sit for 30-40 minutes. Where mud dries up apply again. After applying mud, it is good to stay in mild sunshine. At the end take bath with ordinary tap water. Such a bath is good for diabetics. Be careful that the earth is free from contamination and infection.

The effect of mud poultice is beneficial. Its cool moisture in and under the poultice relaxes the pores of the skin, draws the blood onto the surface, relieves inner congestion and promotes heat radiation and elimination of the morbid matter. Mud poultice retains moisture and coolness much longer than a water pack or compress.

Dr. Henry Lindlaher suggest that "the best way to apply clay packs is the following: Take yellow, or still better, blue potter's clay, mascerate in warm water until it is reduced to a smooth paste, cold spread this with a wooden paddle or broad knife over a strip of cloth wide enough and long enough to cover the part to be treated'. In case of diabetes, we should place this on the abdomen with few wrappings of towelling, flannel or other protecting material. The clay packs or bandages may remain in place until they become hot or dry.

MISCELLANEOUS

Stress brings about physical changes in the body. Certain stress hormones e.g. adrenaline are secreted. These hormones have anti-insulin action in as much as sugar is released from the liver. Repeated conditions of stress result in deficiency of insulin in the body. Meditation, yogic nidra and other relaxation techniques, therefore, assume importance in control of diabetes.

In case of diabetes due to a reduced circulation of blood, there is sometimes partial loss of nerve sensation in the feet. The feet can pick up infection more easily. Foot trouble can develop more readily in case of long time diabetics. To prevent such a situation, feet should be washed once or twice daily with warm water. Feet should be kept warm on cold days and such socks (no garters) and shoes used which fit well. Cut toe nails carefully and give the feet some special exercise.

Diabetics should always keep their extremities warm.

In case of cut to the skin, do not take it carelessly. Obtain proper medical care from day one. More so, if it is on the lower extremity.

Diabetic women are advised to have children, they want, before age 30. Such women are advised not to use oral contraceptives, but resort to other family planning practices.

Diabetes can cause changes in the tiny blood vessels near the skin. Proper skin care, therefore, becomes important. Keep your skin dry. After bath, take special care of the skin folds, armpits and under the breasts. Do not use very hot water. Use fatty soaps so that your skin remains lubricated. Avoid excessive exposure to sun. Sun burns can create problems for diabetics.

Blood vessels in the eyes are likely to show effects of diabetes early. It is desirable for such diabetics to wear sun glasses while out doors. In such cases, do not rub the eyes unnecessarily. Do not strain the eyes. Have adequate light while reading writing or working. Let your dentist also know that you have diabetes.

While eating out, try to follow the outlines of your meal plan. Avoid high-sugar and highly salted foods as also those prepared with sauces, cream or rich gravies.

Alcoholic drinks have different effects on your glucose levels, depending upon the medicines you are taking and also whether such a drink is taken before a meal, with the meal or after the meal. Effects could be drastic.

Alcoholic drinks should be taken as a part of the fat exchange of your meal plan only. Excessive use of alcohol by diabetic males could cause impotency.

Hypertension is more common amongst diabetics. Their combination induces kidney disease. These three problems are inter-related. Unless timely preventive action is taken, combination of these three problems could become dangerous.

A Unique Book

on

Nature Cure

Back to Nature for:

Healthy Living

by the same author

This book was released by Late Shri Rajiv Gandhi, ex-Prime Minister of India at New Delhi on 23 August, 1988.

Some Views about that Book

Shri Atal Bihari Vajpayee, M.P. Former Cabinet Minister for External Affairs, Govt of India in Janata Govt:

I have read the book with great interest. It is well written and gives valuable information about naturopathy. I believe that Naturopathy should be propagated widely in our country. I think that the publication of this book is a useful step in this direction.

Dr. Hiralal, a renowned naturopath of India, Secretary General of the International Foundation of Natural Health and Yoga:

A perusal of the book clearly brings out the all round depth of knowledge, personality, experience and spirit of service of the author. The book contains so much valuable and appropriate information about various aspects of Naturopathy that I could strongly recommend it as a basic primer and reference book for any family which wants to maintain good health. So much material, so well presented about Naturopathy would hardly be available elsewhere in one book.

Dr. B. Venkat Rao, another renowned Naturopath of India and Founder (Director) Nature Cure Hospital and Gandhi Nature Cure College, Begumpet, Hyderabad:

This is the first time during the last 4 decades that an informative, most useful and cost effective book has been published on the system of Naturopathy. Gandhiji would have appreciated this book "Back to Nature for Healthy Living" by Shri A.P. Dewan. As a follower of Gandhiji, I appreciate and suggest to introduce this book as text book in all colleges conducting Yoga and Naturopathy courses.

Shri Ram Chandra Vikal, Member Parliament with special interest in Naturopathy:

Your new book is so good. It is unique in the sense that it comprehends the whole spectrum of natropathy right from physical well-being to spiritual evolvment. I am going to recommend it as the best reading material available on the subject. The author has shown depth of knowledge and has adopted a practical approach. Other nations have a lot to learn from our store of knowledge on this subject of naturopathy so ably propounded in this book.

FOOD FOR HEALTH

A.P. DEWAN



A Unique Book
On Nutrition

Food for Health

by: A.P. Dewan

About the book - a 264 page book that contains authentic information on natural foods, proteins, carbohydrates, fats, vitamins, minerals, dietary fiber, cholesterol, calories, weight, nutrition values, cooking, and what, how much, when and how to eat. It deals extensively with all aspects of 101 most important food items. The last chapter provides separate lists of foods, which could prevent and positively effect various body conditions such as Diabetes, Asthma, Arthritis, Cardiovascular conditions, Nervous disorders, Obesity, Stomach conditions like ulcers, Dysentery, diarrhea, constipation, etc.

The basis thesis of Food For Health is that the body is made of food and must be repaired with food when necessary, as a wall of brick and mortar is best repaired by brick and mortar.

About the author: Mr. A.P. Dewan spent more than 14 years as a Senior Advisor of the World Food Programme of U.N./F.A.O. Mr. Dewan is presently the Chairman of the Nature Cure and Yoga Health Center in Delhi operated by the Servants of the People Society of India. This society was inaugurated by Mahatma Gandhi in 1921.

Reviews: "This book which has been written after extensive and in depth study of the subject in India and abroad, is going to be a great asset to all the medical professionals in their practice and otherwise," **President, Indian Medical Association-Delhi South.**

"A most comprehensive book on Food and Nutrition - it not only contains all the information that even a layman needs on the subject, but also carries it with ease and conviction. The most unique section is on Food as Preventive Medicine, giving various foods that will not only prevent, but even cure various body conditions."



